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Pharmacy Nucleus

THE NEWSLETTER OF THE FACULTY OF PHARMACY

ABOUT US: Pharmacy Nucleus is a quarterly newsletter of the Faculty of Pharmacy, MAHSA University, started in March 2019. It highlights the recent faculty and student news, faculty achievements, and upcoming events.

Dean's Note

Dear MAHSA Pharmacy community and friends!

It is with great pleasure to write to you again halfway through 2020. In this COVID-19 scenario, FOP is showcasing many health awareness campaigns, providing platform for active researchers, and increasing its visibility nationally and internationally. The FOP offers excellent learning opportunities through competent faculty who can provide excellent supervision to help students in their quest for new knowledge.

In the challenging time of COVID-19, there is an increasing demand of paradigm shift in healthcare services. Introducing online education using various e-learning forums FOP will keep on contributing its part through our highly qualified staff, students and alumni. Being the Dean, I could not be prouder of the progress we are making as a faculty and look forward to our continued commitment to be the best.

Message from Editor in Chief

In the second issue of 2020, the Professional Summary for Academic Staff of the Faculty of Pharmacy, MAHSA University is shared. This will be helpful for the prospective postgraduate students to explore and discuss their research interest with respective potential supervisors. Moreover, you will see the highlights of ongoing commitment of our academic and administrative staff to support our students through professional mentorships.

I am pleased to share that FOP is going to start e-Talk series emphasizing the proactive engagement of pharmacist at global scale. I would like to invite you all for these talk series. I firmly believe this initiative will be helpful to adapt to *New Normal* in provision of professional education and skills to the pharmacy students as well as pharmacists.

Please take some time to read this newsletter and enjoy the recap of some of our accomplishments and future projections as a vibrant Faculty.

Professor Dr. Munavvar Zubaid Abdul Sattar



PhD in Pharmacy



Master in Pharmacy



Bachelor of Pharmacy (Hons)



Diploma in Pharmacy

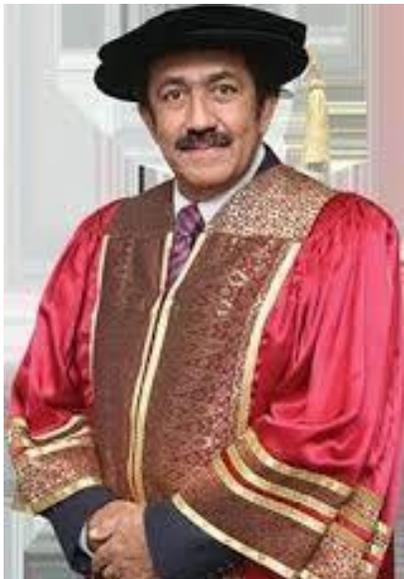
This issue will highlight the faculty news, faculty events, wide array of FOP programmes. I am thankful to the editorial members of Pharmacy Nucleus for the tremendous input and efforts.

Dr. Sohail Ahmad

FACULTY NEWS

PROFESSIONAL SUMMARY FOR ACADEMIC STAFF OF THE FACULTY OF PHARMACY

Munavvar Zubaid, PhD, RPh
Dean and Professor



Professor Dr. Munavvar Zubaid Bin Abdul Sattar took over the helm of the Faculty of Pharmacy, MAHSA University as the Dean in April 2017. Prior to him joining MAHSA, he was the Dean of the School of Pharmaceutical Sciences, Universiti Sains Malaysia (USM). Professor Munavvar earned his Bachelor and Master degrees from USM and obtained his PhD from the Medical School, University of Birmingham, England. The findings from his PhD research were one of the first in the world to

pin point the role of the subtypes of alpha adrenoceptors in the regulation of kidney function in various pathological states. These findings helped to develop newer approaches in the treatment of hypertension.

Professor Munavvar is also well respected in the research world. He has secured grants worth millions of ringgits from both international and local agencies. His illustrious career in academia has seen him publishing more than 170 original research papers in highly reputed academic journals, presented many papers locally and internationally as an invited speaker and proudly graduated dozens of Master and PhDs from numerous countries.

Having been in Pharmacy Education for more than 20 years, he is confident and convinced that Pharmacy education in MAHSA will prepare its students to provide patient-centered and population-based care that optimizes medication therapy; to manage health care system resources to improve therapeutic outcomes, promote health improvement, wellness, and disease prevention.

Pharmacists trained in MAHSA will develop and maintain a commitment to care for, and care about patients, an in-depth knowledge of medications, and the biomedical, socio-behavioral, and clinical sciences, the ability to apply evidence-based therapeutic principles and guidelines, evolving sciences and emerging technologies, and relevant legal, ethical, social, cultural, economic, and professional issues to contemporary pharmacy practice.

Audrey Yong Chee Hui, PhD
Deputy Dean (Acting)
Senior Lecturer
Medicinal Chemistry



Dr Audrey Yong received her undergraduate BSc (Hons) in Chemistry and MSc in Analytical Chemistry and Instrumental Analysis from University of Malaya, and PhD in Pharmacology from Universiti Putra Malaysia. Her doctoral research focused on the pre-clinical development of herbal medicine as a treatment for cancer. Her current research focuses on validating anti-psoriatic and anti-cancer activities of natural and semi-synthetic small

compounds and their mechanisms of action. And has a special interest in chemical standardisation of medicinal herbs using liquid chromatographic technique.

She has also served as a scientific officer in IMU bioequivalence laboratory in 2000 and as Waters®. HPLC application chemist 2007. Dr Yong has several research publications and a patent.

Wati Raman MS, R.Ph
Head of Department
Clinical Pharmacy



Wati Raman received her pharmacy degree from the University of Science (USM), Penang, Malaysia in 1992. She completed her horsemanship in the National Pharmaceutical Control Bureau (NPCB), Hospital Kuala Lumpur and Pharmacy Enforcement Unit (Selangor) the following year. She joined the faculty in 2012, after twenty years' experience in the pharmacy field. She obtained her master's

degree in Clinical Pharmacy from Universiti Teknologi MARA, (UiTM).

Wati Raman accepted a faculty position as the Head of Department (Clinical Pharmacy) in September 2016. She has recently been appointed as the Deputy Dean (Student Experience) of the Faculty of Pharmacy at MAHSA University in September 2017.

Noraseli binti Ali, MSc, RPh
Head of Department
Pharmacy Practice



Noraseli received her undergraduate pharmacy degree from Universiti Kebangsaan Malaysia in 2003 and M.Pharm (Practice) from Universiti Teknologi MARA in 2011. She has 9 years' experience as a community pharmacist. Her research interests are related to pharmacy practice particularly related to community pharmacy services.

Senthil Adimoolam, PhD, RPh
Head Department
Dosage Form Design



Senthil Adimoolam received his undergraduate pharmacy degree from the Dr.M.G.R Medical University, India in 2000 and completed a Post graduate diploma in hospital management from the Annamalai university, India. He graduated from the Master of Pharmacy at the Annamalai University and Ph. D in Pharmacy from the Bhagwant University, India and joined as Chief Pharmacist in the

Al-Enayah Medical groups, Al-Taif, Kingdom of Saudi Arabia in 2005 to 2008.

Dr. Senthil was a professor and Head of the department Pharmaceutics at Brown's College of Pharmacy, Andhra Pradesh, India in 2008 and Karavali College of Pharmacy, India in 2010. He publishes more than 45 research publication and guided around 20 Postgraduate students. He was a Registered pharmacist in Tamil Nadu State Pharmacy Council, India and Kingdom of Saudi Arabia Pharmacy Council.

V.V.S.S. APPALARAJU, PhD, RPh
Head Department
Medicinal Chemistry



V.V.S.S. Appalaraju received his undergraduate pharmacy degree from JNTU Hyderabad, India in 1999 and completed M.Pharm in Phytochemistry from Andhra University, India in 2001. He completed his Ph.D., from Magadh University, India in 2008. He has total of 17 years of teaching experience.

He published 14 research articles in international journals and presented 24 research presentations in national and international conferences. Currently he is serving as Head of the Department of Medicinal Chemistry in Faculty of Pharmacy MAHSA University.

Dr. Ali Attiq, PhD, RPh
Head of Department
Scientific Basis of Therapeutics



Dr. Ali Attiq is Head of Department of Scientific Basis of Therapeutics, Faculty of Pharmacy, MAHSA University Malaysia. Dr. Ali earned his PhD in Pharmacy from Universiti Kebangsaan Malaysia (UKM), Kuala Lumpur Malaysia. His research work exhibited novel and significant insights on the genotoxic and mutagenic potential of drugs combination. Dr. Ali carried out first detailed phytochemical evaluation of *Cyathocalyx pruniferus* and *Alphonsea elliptica*, which resulted in the discovery of two (2) new secondary metabolites from the plant species. He is specialized in cell signaling pathways involved in inflammation and inflammation derived mutagenesis (cancers), Medicinal and bioorganic chemistry of marine and plant based natural products are also his forte.

Gopal Natesan, PhD, RPh
Professor in Medicinal Chemistry
Pharmaceutical Chemistry



Gopal Natesan has received his Doctoral degree (PhD) in Pharmaceutical Chemistry from Hamdard University (Jamia Hamdard) New Delhi, India in 2000 and currently serving as Professor of Medicinal Chemistry in Faculty of Pharmacy, MAHSA University,

Kuala Lumpur, Malaysia. His research focuses on the synthesis of newer small chemical entities, quinazolinones heterocyclic pharmacophore and their preliminary screening in both *in-vivo* and *in-vitro* models mainly focusing on pain & inflammation and also for newer microbial agents.

Dr. Sheryar Afzal, PhD
Senior Lecturer
Scientific Basis of Therapeutics



Dr Sheryar Afzal completed his doctor of veterinary medicine in D.V.M in 1999 and M.Sc (Hons) in Pharmacology in 2003 from University of Agriculture, Faisalabad, Pakistan. He was appointed as lecturer in 2004 in University of Veterinary & animal Sciences, Lahore, Pakistan. Dr. Sheryar earned his PhD in 2017 from Universiti Sains Malaysia, Penang, Malaysia as USM fellowship holder. He also served as graduate assistant and post graduate fellow during his PhD study in USM, Penang.

Irma Wati Ngadimon, MSc, RPh
Lecturer, Exam Coordinator
Pharmacy Practice



Ms. Irma Wati is a pharmacist specializing in clinical and pharmacy practice. Her research interests include improving the quality use of medicines through shared decision making and adherence to therapy, professional development and services in hospital/ community pharmacy as well as pharmacy education.

Muhammad Qamar, MPharm (ClinPharm), BCPS, RPh
Senior Lecturer
Clinical Pharmacy



Muhammad Qamar is a Clinical Pharmacist and Pharmacotherapy Specialist. He received his undergraduate pharmacy degree from the University of Lahore in 2006 and completed a residency in hospital pharmacy at Siddique Sadiq Hospital. He graduated from the Master of Pharmacy (Clinical Pharmacy) at Universiti Sains Malaysia in 2012. Registered Pharmacist with Pakistan Pharmacist Board. He is also Board Certified Pharmacotherapy Specialist from USA.

Prasanthi Sri, PhD
Lecturer
Department of Dosage Form Design



Prasanthi Sri received her undergraduate Degree in Bachelor of Science Hons from the University Malaysia Sabah in year 2007 and joined as a research assistant under the School of Pharmacy at University of Nottingham of Malaysia Campus. Prasanthi Sri accepted the MPhil programme and the programme was converted to a PhD. After completion of her PhD, Prasanthi Sri joined

MAHSA University and currently was attached there as a lecturer in Faculty Pharmacy.

Venkatalakshmi Ranganathan, PhD, RPh
Senior Lecturer
Department of Dosage Form Design



Comprehensive knowledge of basic principles involved in **Formulation Development and Drug Delivery**, derived from extensive graduate training in **Pharmaceutical Technology**. Conducted research focused on the **improved bioavailability** of poorly bioavailable drugs using various techniques (Films, patches and tablet form), **selection of carriers and polymers** including the formulation

development with special emphasis on **buccal, topical, parenteral and transdermal drug delivery system**. This work involves the usage and handling of DSC, UV, IR spectrophotometer, Rheometer, Tablet Compression machine and SEM. This experience includes interface with a highly diverged profile, which ranges from *in vitro* to *in vivo* studies. It was a nice experience to implement & exercise the Good Laboratory Practices in research experiments. I am strong enough to design and implement research as well as teaching strategies in a competitive and challenging work environment.

Mohd Javed Qureshi, PhD
Senior Lecturer
Department of Dosage Form Design



Dr. Mohd Javed has obtained his Masters in Pharmacy (Pharmaceutics) and PhD (Pharmaceutics) from Jamia Hamdard (Hamdard University) New Delhi, India in 2008 . After completion of his PhD he joined Jubilant Organosys (Pvt) Ltd (a renowned pharmaceutical company in India) and worked as Research Scientist in novel drug delivery system (NDDS) department till 2010. Later on, he moved to academics and worked with couple of prestigious Malaysian universities. He is having an extensive teaching and research experience of 10 years. Dr. Javed specializes in Nanotechnology based drug delivery system, Microencapsulation, chronomodulated drug delivery system, solid dosage form development and optimization.

Sohail Ahmad, PharmD, MSc (Clinical Pharmacy), RPh
Lecturer
Clinical Pharmacy



Dr. Sohail Ahmad is a clinical pharmacist specializing in evidence-based pharmacotherapy, pharmaceutical care, and research methodology. His research interests include improving self-management of chronic diseases, impact of pharmacist-led clinical interventions, and optimal management of respiratory diseases.

Ashutosh Kumar Verma MSc (Pharmacy Practice), RPh
Lecturer
Pharmacy Practice

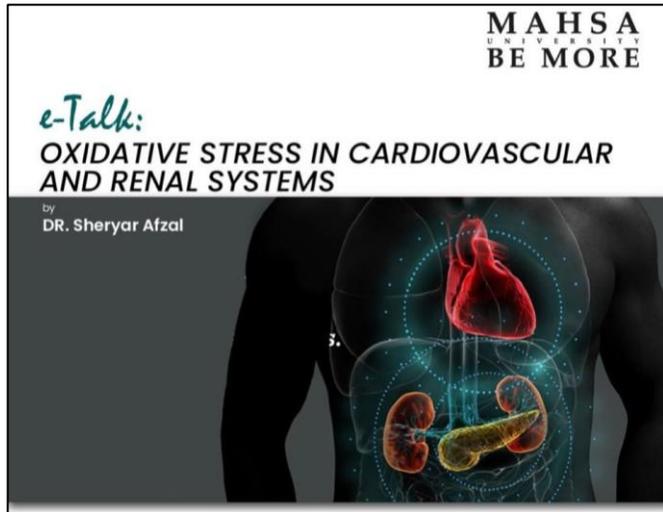


Mr. Ashutosh is a registered pharmacist specializing in clinical and pharmacy practice. He received his Bachelor of Pharmacy from India and Master of Science (Pharmacy Practice) from Universiti Sains Malaysia. His research interest includes drug safety, patient care, Quality Use of Medicines, pharmacoepidemiological research, research methodology.

E-TALK SERIES

Oxidative Stress in Cardiovascular and Renal Systems

Dr. Sheryar Afzal



MAHSA UNIVERSITY
BE MORE

e-Talk:
OXIDATIVE STRESS IN CARDIOVASCULAR AND RENAL SYSTEMS
by
DR. Sheryar Afzal



Dr Sheryar Afzal

Dr Sheryar Afzal is a Senior Lecturer in the Department of Scientific Basis of Therapeutics in the Faculty of Pharmacy of MAHSA University. He earned his PhD (Pharmacology) in 2017 from Universiti Sains Malaysia (USM), Penang, as a USM fellowship holder and was awarded the "SANGGAR SANJUNG AWARD 2014".

He possess fifteen years of teaching and research experience to undergraduate and postgraduate Pharmacology students, which enabled him to author and publish more than twenty-three full scientific research publications in reputable high-impact factor journals with more than thirty-eight abstract proceedings at national and international levels. Dr Sheryar's main research interest encompasses the pharmacology of the cardiovascular and renal systems at receptor levels, and the pharmacokinetics of indigenous and synthetic formulations, as well as the toxicity of indigenous medicinal plants. With his expertise in developing different animal models for the scientific study including diabetic, hypertensive and renal hypertensive models, Dr Sheryar's research also involves the training of new researchers in handling laboratory experimental animals.

Sleep is Your Superpower: The Effect of Sleep Deprivation

Mr. Muhammad Qamar



MAHSA UNIVERSITY
BE MORE

e-Talk:
SLEEP IS YOUR SUPERPOWER: THE EFFECTS OF SLEEP DEPRIVATION
by
Mr. Muhammad Qamar
RPh (Pakistan), MMPS (Malaysia)
MPharm (Clinical Pharmacy, USM),
GCP (Malaysia), BLS (USA), BCPS (USA)

25 June 2020 | 3.00 - 4.00 pm

MAHSA UNIVERSITY
BE MORE



Mr. Muhammad Qamar
RPh (Pakistan), MMPS (Malaysia)
MPharm (Clinical Pharmacy, USM),
GCP (Malaysia), BLS (USA), BCPS (USA)

Mr Qamar currently works as a Senior Lecturer in the Faculty of Pharmacy, MAHSA University. He is a certified Board of Pharmacotherapy specialist from the USA. He received his undergraduate degree in pharmacy from the University of Lahore, Pakistan (2006), and completed a residency in Siddique Sadiq Hospital. He graduated with a Master of Pharmacy (Clinical Pharmacy) from Universiti Sains Malaysia, Malaysia (2012). He is a registered pharmacist with the Pakistan Pharmacy Board and also an associate member of the Malaysia Pharmaceutical Society (MPS). Mr Qamar has more than 30 research articles published in reputable journals. His expertise and research areas are clinical pharmacy practice, smoking cessation and public health. He has also been acknowledged with travel awards for presenting his research outcome in an international conference. Mr Qamar was also appointed as a book reviewer of ACCP: Abulatory Care Self Assessment Program (ACSAP) 2018 Book 3, Module 1 (Nephrology/Geriatric Care) and Pharmacotherapy Self-Assessment (PSAP) 2018 Book 3, Module 3 (Neurology/Psychiatry).

MAHSA UNIVERSITY

Faculty of Pharmacy

e-Talk:
Emerging Roles of Pharmacist in Global Health

by Dr Sohail Ahmad

Live on FACEBOOK

16 July 2020 | 3.00pm

 /MAHSAUniversity

www.mahsa.edu.my

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Dr. Sohail Ahmad

Dr Sohail Ahmad is a clinical pharmacist specialising in evidence-based pharmacotherapy, pharmaceutical care, epidemiology and research methodology. His research interests include self-management of chronic diseases, pharmacist-led clinical interventions, and patient-reported outcomes. He has successfully published five book chapters in CRC Press, Taylor & Francis Group, London; and more than twenty research articles in prestigious journals including Lancet, Pharmacotherapy, Respiriology, Journal of Asthma, Value in Health, Frontiers in Pharmacology and Frontiers in Public Health.

Dr Sohail has received various highly coveted research awards that include the European Respiratory Society (ERS) Young Investigator Award 2018 (Taiwan), International Society of Pharmacoeconomics and Outcome Research (ISPOR) Travel Award 2018 (Japan), The International Institute of Knowledge Management (TIKM) Travel Award 2018 (Thailand), Lung Foundation Malaysia (LFM) Education and Travel Awards 2015 and 2017 (Malaysia), Best Researcher Award 2018 (3rd Position) (MAHSA University, Malaysia), Gold Medal and Diamond Award 2013 (innovation category) in Invention, Innovation and Design Expo (IIDEX) (Malaysia), and Bronze Medal in Bio-Malaysia, Asia Pacific Conference and Exhibition 2013 (Malaysia). His research achievements, list of publications and record of citations are available at https://www.researchgate.net/profile/Sohail_Ahmad9.

Inflammation: The Good, the Bad and the Ugly

Dr. Ali Attiq



MAHSA UNIVERSITY

Faculty of Pharmacy

e-Talk:

Life Style Drugs and Obesity

by Dr Ali Attiq



Ali Attiq received his PhD degree from Universiti Kebangsaan Malaysia in 2019. He specialises in cell-signalling pathways involved in inflammation and inflammation-induced cancers and pathways leading to cancer. Medicinal and bioorganic chemistry of marine and plant-based natural products are also his forte.

 /MAHSAUniversity

Live on FACEBOOK

23 July 2020 | 3.00pm

www.mahsa.edu.my

Dr. Ali's research work exhibited novel and significant insights on the genotoxic and mutagenic potential of drugs combination. He carried out first detailed phytochemical evaluation of *Cyathocalyx pruniferus* and *Alphonsea elliptica*, which resulted in the discovery of two (2) new secondary metabolites from the plant species. He is specialized in cell signaling pathways involved in inflammation and inflammation derived mutagenesis (cancers), Medicinal and bioorganic chemistry of marine and plant based natural products are also his forte.

Faculty Research

Inflammopharmacology
<https://doi.org/10.1007/s10787-020-00734-2>

Inflammopharmacology



REVIEW

Modulation of inflammatory pathways, medicinal uses and toxicities of *Uvaria* species: potential role in the prevention and treatment of inflammation

Juriyati Jalil¹ · Ali Attiq² · Chiew Chia Hui¹ · Lui Jin Yao¹ · Nurul Aimi Zakaria¹

Received: 4 February 2020 / Accepted: 13 June 2020
 © Springer Nature Switzerland AG 2020

Abstract

The therapeutic efficacy of the contemporary anti-inflammatory drugs are well established; however, prolonged use of such can often lead to serious and life-threatening side effects. Natural product-based anti-inflammatory compounds with superior efficacy and minimum toxicity can serve as possible therapeutic alternatives in this scenario. Genus *Uvaria* is a part of Annonaceae family, while the majority of its species are widely distributed in tropical rain forest regions of South East Asia. *Uvaria* species have been used extensively used as traditional medicine for treating all sorts of inflammatory diseases including catarrhal inflammation, rheumatism, acute allergic reactions, hemorrhoids, inflammatory liver disease and inflamed joints. Phytochemical analysis of *Uvaria* species has revealed flavones, flavonoids, tannins, saponins, polyoxygenated cyclohexene and phenolic compounds as major phyto-constituents. This review is an attempt to highlight the anti-inflammatory activity of *Uvaria* species by conducting a critical appraisal of the published literature. The ethnopharmacological relevance of *Uvaria* species in the light of toxicological studies is also discussed herein. An extensive and relevant literature on anti-inflammatory activity of *Uvaria* species was collected from available books, journals and electronic databases including PubMed, ScienceDirect, Scopus, Proquest and Ovid. Extracts and isolates of *Uvaria* species exhibited significant anti-inflammatory activity through various mechanisms of action. 6,7-di-*O*-Methyl-baicalin, flexuvarol B, chrysin, (-)-zeylenol, 6-hydroxy-5,7-dimethoxy-flavone, and pinocembrin were the most potent anti-inflammatory compounds with comparable IC₅₀ with positive controls. Therefore, it is suggested that further research should be carried out to determine the pharmacokinetics, pharmacodynamics and toxicity of these therapeutically significant compounds, to convert the pre-clinical results into clinical data for drug development and design.

frontiers
in Pharmacology

ORIGINAL RESEARCH
 published: 10 January 2020
 doi: 10.3389/fphar.2019.01621



Validation and Reliability of Healthcare Workers' Knowledge, Attitude, and Practice Instrument for Uncomplicated Malaria by Rasch Measurement Model

Nahlah E. Ismail¹, Nanloh S. Jimam^{1,2*}, Maxwell L. P. Dapar² and Sohail Ahmad¹

¹ Department of Clinical Pharmacy, Faculty of Pharmacy, MAHSA University, Petaling Jaya, Malaysia, ² Department of Clinical Pharmacy and Pharmacy Practice, Faculty of Pharmaceutical Sciences, University of Jos, Plateau State, Nigeria

OPEN ACCESS

Edited by:
Sam Salek,
University of Hertfordshire,
United Kingdom

Background: This study assessed the validity and reliability of healthcare workers' knowledge, attitudes, and practices instrument for uncomplicated malaria (HKAPIUM) for evaluation of healthcare workers' knowledge, attitudes, and practices (KAP) on uncomplicated malaria management in primary healthcare (PHC) facilities in Plateau state, Nigeria.

frontiers
in Public Health

ORIGINAL RESEARCH
 published: 22 January 2020
 doi: 10.3389/fpubh.2019.00420



Assessment of Self-Stigma, Self-Esteem, and Asthma Control: A Preliminary Cross-Sectional Study Among Adult Asthmatic Patients in Selangor, Malaysia

Sohail Ahmad^{1*}, Ahmad Izuannudin Ismail¹, Mohd Arif Mohd Zim² and Nahlah Elkudssiah Ismail¹

¹ Faculty of Pharmacy, MAHSA University, Jenjarom, Malaysia, ² Respiratory Unit, Faculty of Medicine, Universiti Teknologi MARA, Batu Caves, Malaysia

OPEN ACCESS

Edited by:
Daniel F. Sarpong,
Xavier University of Louisiana,
United States

Purpose: The elusive goal of asthma management guidelines is to achieve and maintain good asthma control in asthmatic patients. Against a background of long-term respiratory limitations when living with asthma, stigma and low self-esteem have also been identified as the social phenomenon among adult asthmatics. This study aimed to assess the levels of self-stigma, self-esteem, and asthma control, and to investigate the impact of self-stigma and self-esteem as psychosocial factors on asthma control in Malaysian adults living with asthma.

Inflammopharmacology
<https://doi.org/10.1007/s10787-020-00734-2>

Inflammopharmacology



REVIEW

Reducing Missed Medication Doses in Intensive Care Units: A Pharmacist-Led Intervention

Mukhtar Jawad Alomar¹, Sohail Ahmad², Yahya Moustafa¹, Lafi Salim Alharbi¹

¹Department of Pharmacy Administration, King Fahad Medical City, Riyadh, Kingdom of Saudi Arabia
²Department of Clinical Pharmacy, MAHSA University, Kuala Langat, Selangor, Malaysia

ABSTRACT

Objective: The objectives of this study were to investigate the frequency and reasons for missing doses and impact of a pharmacist-led intervention to reduce the missed doses in intensive care units. **Methods:** This study was completed in two phases. In the first phase, a retrospective quality assurance audit was conducted to quantify the problem of missed doses from the pharmacist/nurse communication slip record. The frequency and potential reasons for missing dose occurrences were identified and listed, and respective solutions were finalized by a joint health-care team. In the second phase of the study, post-intervention analysis was done for a period of 1 month to check the impact of intervention. The data were recorded from pharmacy/nursing communication forms for medication, dosage form, route of administration (ROA), frequency of missed doses, and underlying reasons for missing doses. **Findings:** There was a substantial reduction in the number of incidences of missed doses in post-intervention phase. The number of events decreased from 190 (pre-intervention; 2 months) to 11 (post-intervention; 1 month), 389 to 87, and 133 to 12 for automatic stop order, unknown reason, and late mix medication, respectively. No missed dose event was recorded secondary to order overseen and inactive patient status in post-intervention phase. Moreover, identified reasons, ROA, frequency, and the system status were the significant predictors of missing doses. **Conclusion:** The findings of this study emphasized the need to introduce better documentation procedures and continuous surveillance system to decrease the number of missing doses and further improve already established drug distribution service.

KEYWORDS: Clinical, intensive care unit, intervention, medication error, missed doses, pharmacists

Received: 12-05-2019
 Accepted: 05-10-2019
 Published: 28-03-2020.

OPPORTUNITIES FOR PROSPECTIVE STUDENTS

A. Bachelor of Science (Honours) in Pharmaceuticals Technology

Bachelor of Science (Honours) in Pharmaceuticals Technology is a 3 years undergraduate degree programme that stands distinctively unique compared to a Bachelor of Pharmacy in the aspects of drug discovery and development and the use of technology to produce results that are required for the global pharmaceutical demands. The objective of this programme is to produce knowledgeable and competent pharmaceutical technologist who can function effectively in work process design in pharmaceutical, cosmeceutical, pharmaceutical biotechnology, veterinary, pharmaceutical microbiology and radiopharmaceutical industries.

Graduates will be equipped with the capability of adapting to global changes and current developments. This programme will prepare graduates to seek employment in research laboratories, in drug production, in regulatory services, in quality control and assurance management as well as in the marketing of pharmaceutical and other related products.



MAHSA UNIVERSITY

BACHELOR OF SCIENCE (HONOURS) IN PHARMACEUTICALS TECHNOLOGY

KPT/JPS (N/727/6/0105)(MQA/PA12565) 11/24

FACULTY OF PHARMACY

“ If you define the problem correctly, You almost have the solution. ”
- Steve Jobs



Mode of delivery of this programme includes lectures and tutorials, problem-based learning (PBL), presentation, computer-aided learning (CAL), laboratory practical, and industrial attachments. There will be a final year Industrial research project which students will need to complete before graduation.



PROGRAMME STRUCTURE

Year 1 - Semester 1 <ul style="list-style-type: none">• Introduction to Physiology• Physical Pharmacy• Introduction to Chemistry• Scientific Basis of Therapeutics• Biochemistry	Year 1 - Semester 2 <ul style="list-style-type: none">• Pharmaceutical Engineering I• Dosage Form Design I• Medicinal Chemistry I• Veterinary Pharmacy• Principle of Laboratory Animal Sciences
Year 2 - Semester 3 <ul style="list-style-type: none">• Pharmaceutical Engineering II• Dosage Form Design II• Pharmaceutical Microbiology• Personal & Professional Development• Immunology• Analytical Chemistry I• Medicinal Chemistry II• Phytopharmaceutical	Year 2 - Semester 4 <ul style="list-style-type: none">• Dosage Form Design III• Pharmaceutical Biotechnology• Pharmaceutical Calculations and Biostatistics• Introduction to Biopharmaceutics and Pharmacokinetics• Pharmaceutical Quality Assurance• Radiopharmacy• Analytical Chemistry II
Year 3 - Semester 5 <ul style="list-style-type: none">• Drug Delivery System• Introduction to cosmetics & Cosmeceuticals• Pharmacotoxicology• Pharmaceutical Regulatory Control• Research Methodology• Industrial Attachment and Research Project I• Complementary Medicine• Drug in Sports and Lifestyle drug	Year 3 - Semester 6 <ul style="list-style-type: none">• Industrial Attachment and Research Project II• Principles of Marketing• Computer Aided Drug Development System• Pharmaceutical Management• Pharmacoinformatics

Career Prospects

Upon the completion of this programme, graduates will be able to work as:



- Industrial Pharmaceutical Technologist
- Formulation Design and Development Scientist
- Research and Development Officer
- Quality control & Assurance Officer
- Pharmaceutical Regulatory Officer
- Pharmaceutical Sales & Marketing Executive
- Pharmaceutical Lab Technologists in Academia
- Pharmaceutical Biotechnologist and Microbiologist
- Medical Coding Executive

B. Doctor in Philosophy (PhD.)

KPT/JPS (N/727/8/0049) (MQA/PA3093) 01 / 20



Research mode programmes are offered by the Faculty of Pharmacy emphasis on multidisciplinary research and product development. These research intense programmes are conducted

either by laboratory, laboratory-survey based or survey-based in various area of pharmacy which includes:

Medicinal chemistry
Pharmacognosy
Pharmaceutical Microbiology
Dosage form design
Pharmacy Practice
Clinical Pharmacy
Pharmacology

Research Journey

The research programme can be taken on either a full time or part time basis. For PhD programme, the duration is 3-4 for full time, 4-7 for part time. Minimum period of candidates will be 30 months with a maximum of four years for students enrolled on full time basis. Candidates will carry out supervised research on a topic approved by the faculty on the recommendation of the head of discipline/ department, and a write thesis embodying the results of this research.

Research @ MAHSA University

Research at MAHSA University is always evolving; inspiring the active mind and providing new tools and ways of thinking that lead to innovation. a postgraduate degree is a training exercise in which the candidate acquires knowledge of research methods and experience in planning, performing and publishing result under the guidance of supervisor.

The success of that training is assessed through thesis, which in the case of PhD is expected to provide some evidence of originality and thereby make some significant contribution to knowledge, at least some which is publishable.

Guides and Supervisors

Our supervisors are member of academic or appropriately senior research staff, appointed to take primary responsibility for the conduct of students' research candidate. The supervisors are available at all stages of the candidature for advice, assistance and direction and are responsible for the progress of the candidature to the head of department and faculty.

The role of our supervisory team will generally always consist: ensuring sufficient resources are available to support the candidate; providing advice about the initial research plan; ensuring that candidate is aware of the particular research skills to be acquires and the appropriate techniques are established for gathering and analyzing data; monitoring progress made in context of the research plan; agreeing on a timetable for frequent and regular contact and acknowledging the need for periodic review of these arrangements; establishing agreed indicators of progress; providing regular and constructive feedback on written analysis and drafts; and providing sound advice about relevant administrative matters.

Career prospects

The successful candidates will get endless opportunities to work in any organizations providing healthcare services and pharmaceutical industries. It is also a foundation for the candidates

to specialize in many fields of pharmacy especially those wanting to pursue a job in clinical pharmacy, research and development organizations, and of course, the teaching institutions as academics.

C. Master in Pharmacy

KPT / JPS (R/727/7/0045) (MQA/FA3399) 10 / 23

Faculty of Pharmacy, MAHSA University proudly announces that our Master in Pharmacy (Research) programme has been awarded full accreditation from the Malaysian Pharmacy Board and Malaysian Qualification Agency (MQA). Master in Pharmacy programme at MAHSA University is an elite, multi-disciplinary postgraduate degree programme tailored for candidates who are looking to go into research, education, consultation, or any other specialisation in Pharmacy.

MAHSA University offers a research based Master in Pharmacy postgraduate degree with rigorous grounding in a broad range of disciplines that are critical to success as a pharmaceutical scientist in academia and industry. Our programme includes a cutting-edge research focused on topics like discovery and evaluation of biologically active compounds and their pharmacological or biopharmaceutical investigation, advanced delivery methods to improve drug treatment, and how medication is used and applied to enhance patient outcomes. Students can explore different fields of pharmaceutical research according to their interests.

Faculty of pharmacy offering Master in Pharmacy (Research) programme in following disciplines:

- Pharmaceutical Chemistry
- Pharmacology
- Clinical Pharmacy
- Pharmacognosy
- Phytochemistry
- Pharmaceutical Technology (Dosage Form Design)
- Pharmaceutical Analysis
- Pharmacy Practice

Intake: April 2020
Duration: Two (2) Years
Course Type: Full time/Part Time
Entry Requirement: Bachelor's Degree in Pharmacy, Science or any relevant field with minimum CGPA 2.75 from universities recognized by the Senate of MAHSA University

MAHSA

U N I V E R S I T Y

BE MORE



Pharmacy Lab



Residences



Simulation Ward



The Habitat



Library



Clinical Skills Centre

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